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REFERENCE

CHECKING PACKAGED AEROSOL PRODUCTS, FOAM-TYPE (NON-FOOD)

A Supplement to
National Bureau of Standards Handbook 67
Checking Prepackaged Commodities

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CHECKING PACKAGED AEROSOL PRODUCTS, FOAM-TYPE (NON-FOOD)

This draft covers the checking of packaged aerosol products, foam-type (excluding all food products, such as whipped cream and toppings) and has been prepared as an addition to the package checking procedures presented in National Bureau of Standards Handbook 67.* References to other procedures are those contained in Handbook 67.

The step-by-step procedure set forth below has been developed as a parallel to Steps 1 through 5 on page 11 of Handbook 67 which are directed to conventional standard-pack packages.

Standard-Pack Packages, Aerosol Foam-Type Products

(Packaged aerosol foam-type products should be checked at a temperature between 70° to 80°F.)

Step 1. --Select a sample of 10 or more identical packages (identical as to labeled weight, brand, and commodity). Remove any covers or caps not required for dispensing the product.

Step 2. --Check the gross weight of each package to determine the lightest and heaviest package in the sample. Record the gross weight of the lightest and heaviest package.

Step 3. --Following instructions on the container, prepare the lightest package for the checking procedure. If shaking is specified, shake the container with a wrist-twisting motion for 15 seconds at the approximate rate of one complete cycle per second.

Step 4. --Exhaust the lightest container by holding the valve wide open for 35 minutes. During this exhausting procedure the container should be held in the proper position (generally upright or inverted) as specified in the instructions on the package. (A lightweight, portable, test stand equipped with an adjustable valve-button depressor may be used for this operation.)

* Copies of Handbook 67 are available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, at 35 cents per copy. (Remittance must accompany order. Postage stamps not acceptable).

Step 5. --Rinse and dry the exterior of the container. (If the nozzle is removable, remove for cleaning and drying, and then replace the nozzle.)

Step 6. --Weigh the empty container to determine the wet tare. (The wet tare is defined as the weight of the container plus any product that is not expelled during the exhausting procedure.)

Step 7. --Determine the regeneration allowance by reference to the following table. (The regeneration allowance is the difference in the weight of product delivered through normal consumer usage and the weight of the product delivered through the accelerated procedure as outlined in Step 4, and as determined by laboratory investigation.) The regeneration allowance also may be computed by multiplying the labeled weight by the regeneration factor (which has been determined to be 0.02 for foam-type products). Thus, if the labeled weight is 6 1/4 oz. (6.25 oz.), obtain the regeneration allowance by multiplying the labeled weight by 0.02 (i. e., 6.25 oz. \times 0.02 = 0.125 oz. \approx 2/16 oz.).

Labeled Weight of Package				Regeneration Allowance (label wt. \times factor of 0.02)
	Zero	to less than	1 9/16 oz.	Zero
	1	9/16 oz. to less than	4 11/16 oz.	1/16 oz.
	4	11/16 oz. to less than	7 13/16 oz.	2/16 oz.
	7	13/16 oz. to less than	10 15/16 oz.	3/16 oz.
	10	15/16 oz. to less than	14 1/16 oz.	4/16 oz.
	14	1/16 oz. to less than	1 lb. 1 3/16 oz.	5/16 oz.
1 lb.	1	3/16 oz. to less than	1 lb. 4 5/16 oz.	6/16 oz.
1 lb.	4	5/16 oz. to less than	1 lb. 7 7/16 oz.	7/16 oz.
1 lb.	7	7/16 oz. to less than	1 lb. 10 9/16 oz.	8/16 oz.

Step 8. --Subtract the regeneration allowance from the wet tare to obtain the corrected wet tare.

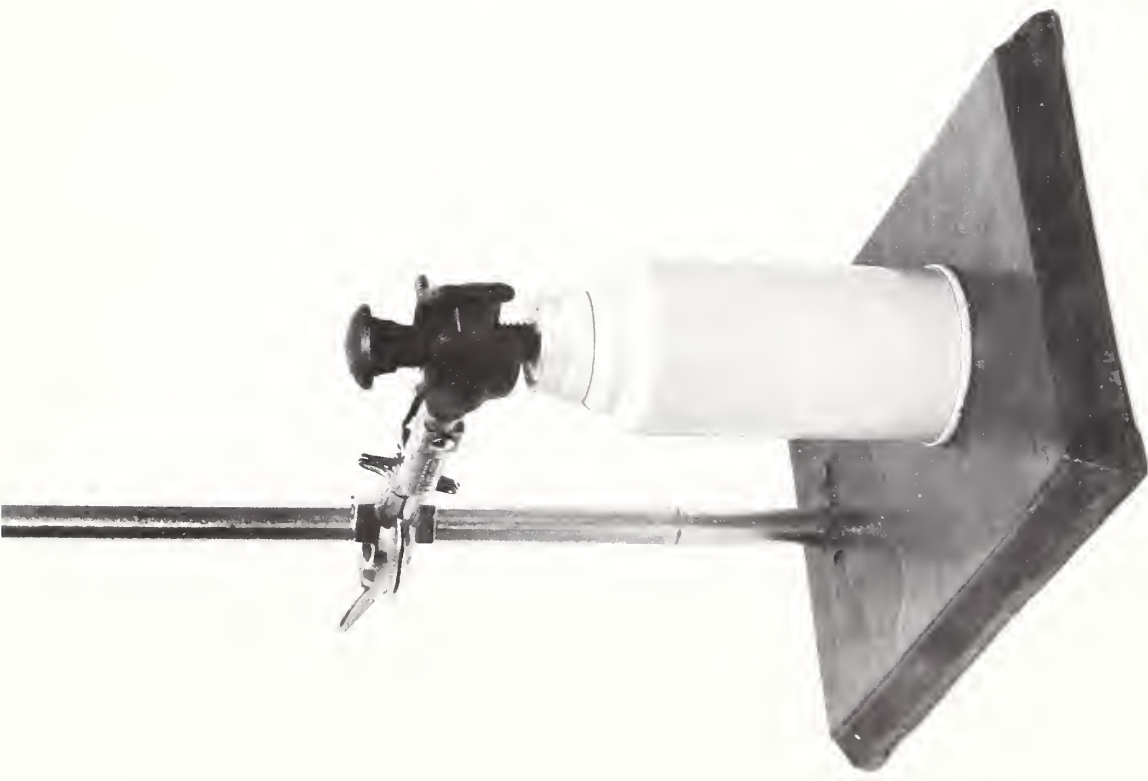
Step 9. --Subtract the corrected wet tare from the gross weight to obtain the adjusted net weight of the lightest package.

Step 10. --If the adjusted net weight of the lightest package at least equals the declared net weight it may be reasonable to assume that the lot is satisfactory.

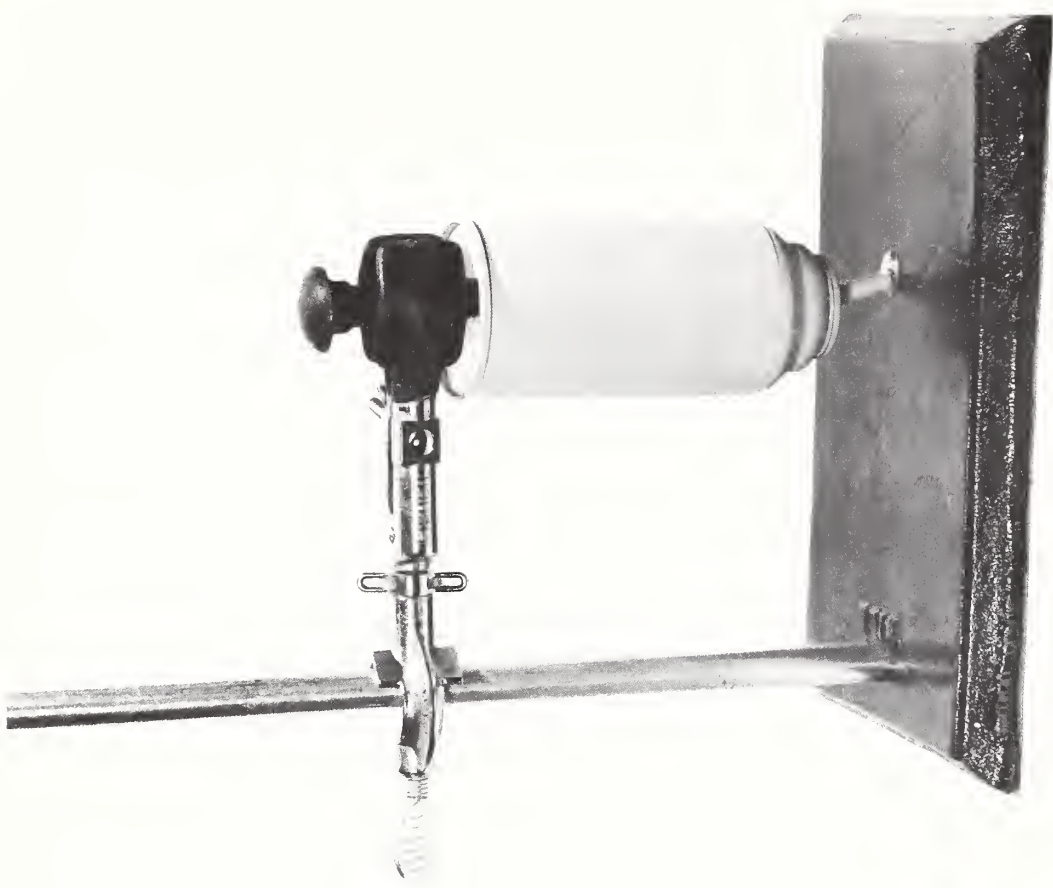
Step 11. --If the adjusted net weight of the lightest package is less than the declared weight it will be necessary to treat the 10 packages as a sample of the lot and proceed to weigh them individually to determine individual errors. For this procedure it will be essential to arrive at an average corrected wet tare weight to be added to the labeled net weight of the package to determine a "standard" gross weight with which the packages will be compared.

In order to arrive at a representative average corrected wet tare weight for the sample, Steps 3 through 8 must be repeated with the heaviest package to obtain its corrected wet tare weight. The average of the two corrected wet tare weights may then be accepted as the tare weight for the weighing of individual packages. In rounding off this average always round off to the lower figure, (i. e., the average of $2 \frac{10}{16}$ oz. and $2 \frac{11}{16}$ oz. is $2 \frac{10}{16}$ oz.). (The inspector is cautioned that the tare of a single package is not considered acceptable as an average corrected wet tare, and also that no "permanent" or "reference" record of tares is acceptably reliable.)

Step 12. --With standard weights in an amount equal to the "standard" gross weight for the sample packages on one side of the scale (or as the "standard" gross weight in the "substitution" procedure if an equal-arm scale is not used), weigh the remaining packages of the sample and record the error of all sample packages. Exclude, by circling, any errors (\pm) that are unreasonably large and determine an average error for the sample (see Steps 1, 2, 3, 4, and 5 of 8. 1., NBS Handbook 67).



a. As used for exhausting containers that dispense the product in an upright position.



b. As used for exhausting containers that dispense the product in an inverted position.

Fig. 1. A light weight portable test stand with an adjustable valve depressor. a /
a / Component list, assembly, and operation described on the facing page.

The light weight portable test stand with the adjustable valve depressor easily may be assembled. The major components are available from any scientific supply company. The components and the approximate cost are as follows:

<u>Item</u>	<u>Approximate Cost</u>
Support Stand	\$2.00
Utility Clamp	1.75
Carriage Bolt (1/2 in. , 2-3 in. long) and Nut	<u>.10</u> \$3.85

In the assembly of the stand, the carriage bolt is threaded into the nut and the nut is gripped tightly by the rubber covered jaws of the clamp. The clamp is then mounted on the rod of the support stand.

In the operation of the stand, the height of the clamp is adjusted to the height of the container under test and the final valve-depressing adjustment made by turning down the carriage bolt until maximum flow of product is obtained.

